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“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 4371 (1994) : Textiles- Kamblies, wool
khadi, loomstate-Specification [TXD 8: Handloom and Khadi]

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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

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“Knowledge is such a treasure which cannot be stolen”



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भारतीय मानक
वस्त्रादि – खादी की कोरी ऊनी कम्बलियाँ – विशिष्ट
(पहला पुनरीक्षण)

Indian Standard

TEXTILES — *KAMBLIES, WOOL KHADI,*
LOOMSTATE — SPECIFICATION

(*First Revision*)

UDC 645.482 : 677.31.074 KAM

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BUREAU OF INDIAN STANDARDS
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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Handloom and Khadi Sectional Committee had been approved by the Textile Division Council.

This standard was first published in 1967. This standard has been revised to overcome difficulties encountered by the khadi industry in implementation of the standard.

Following are the important changes carried out while revising this standard:

- a) Tolerance on length and width as notified by the Government of India under *Trade and Merchandise Marks Act 1958* (43 of 1958) have been adopted.
- b) For checking the conformity of the *KAMBLIES* to the requirements laid down in this standard, a provision has been made for testing of samples in prevailing atmospheric conditions. However, in case of dispute, the samples shall be tested after conditioning in the standard atmospheric conditions.
- c) The standard provides for agreement between the buyer and the seller with respect to permissible number of defects in the *KAMBLIES*.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (revised)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard
**TEXTILES — KAMBLIES, WOOL KHADI,
 LOOMSTATE — SPECIFICATION**
(First Revision)

1 SCOPE

1.1 This standard prescribes constructional particulars and other requirements of *KAMBLIES*, wool khadi, loomstate.

1.2 This standard does not specify the general appearance, feel, finish, etc.

2 REFERENCES

The Indian Standards listed at Annex A are necessary adjuncts to this standard.

3 ATMOSPHERIC CONDITIONS FOR TESTING

Test specimens may be conditioned and tested in the prevailing atmospheric conditions for determining the conformity of *KAMBLIES* to the standard. However, in case of dispute, the specimens shall be conditioned and tested in the standard atmosphere as specified in the referred Indian Standards on test methods.

4 MANUFACTURE

4.1 Yarn

The woollen yarn used in the manufacture of *KAMBLIES*

shall be hand spun and free from admixture of non-wool fibres. The approximate count of the warp and weft yarn is given in Table 1.

4.2 KAMBLIES

4.2.1 The *KAMBLIES* shall be woven in plain weave.

4.2.2 The selvedges shall be firm and well woven.

4.2.3 The transverse ends of *KAMBLIES* shall be finished with a fringe.

4.2.4 The *KAMBLIES* shall have white border 5 cm in width at a distance of 5 cm from each selvedge.

4.2.5 The *KAMBLIES* shall be woven in single piece, or two equal pieces of appropriate width shall be joined by stitching them in the centre, if agreed to between the buyer and the seller. Two ply woollen thread shall be used for stitching and number of stitches per decimetre shall not be less than 25.

5 REQUIREMENTS

5.1 The constructional particulars and breaking load of *KAMBLIES* shall conform to the requirements specified in Table 1.

**Table 1 Constructional Particulars and Breaking Load Requirements of
KAMBLIES, Wool Khadi, Loomstate**
(Clauses 4.1 and 5.1)

Count of Yarn (for Guidance Only) Universal Count (Woollen Count*)	Ends/dm		Picks/dm		Mass g/m ²		Breaking Load on 15 × 20 cm Strip in Newton	
	Warp (1)	Weft (2)	(3)	(4)	(5)	Warp (6)	Weft (7)	
200 tex × 2 (10s/2)	250 tex (8s)	78	32	475	1 240	570		
Tolerance percent	—	—	±5	±5	±5	-10	-10	
Method of Test	—		IS 1963 : 1981		IS 1964 : 1970 or Annex C		IS 1969 : 1985	

* Yorkshire

NOTE — Any increase in values of ends/dm, picks/dm or mass (g/m²) beyond positive tolerance shall not be a cause of rejection of the *KAMBLIES*.

5.2 Dimensions

Length and width of the *KAMBLIES* when determined in accordance with IS 1954 : 1990 shall be as agreed to between the buyer and the seller or as declared by the seller subject to the tolerances notified in the Government of India, Ministry of Commerce and Industry Notification No. S.O. 2937 dated 20 September 1962 issued under *Trade and Merchandise Marks Act 1958* (43 of 1958) (see Annex B).

5.3 Scouring Loss

The scouring loss of the *KAMBLIES* shall not exceed 20 percent.

5.3.1 The scouring loss shall be determined in accordance with the method given in Annex D.

5.4 Freedom from Defects

5.4.1 The *KAMBLIES* when visually inspected shall be free from the major flaws listed at Annex E. However, the number of permissible flaws per piece may be as agreed to between the buyer and the seller.

5.4.2 For details of the flaws mentioned in 5.4.1, a reference may be made to IS 4125 : 1987.

5.5 Sealed Sample

5.5.1 In order to illustrate or specify the indeterminable characteristics, such as general appearance, feel, shade etc, if a sample has been agreed upon and sealed, the supply shall also be in conformity with the sample in such respects.

5.5.2 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

6 MARKING

6.1 The *KAMBLIES* shall be suitably marked with the following information:

- Name of the material;
- Length (cm) and width (cm); and
- Indication of the source of manufacture.

6.2 BIS Certification Marking

The *KAMBLIES* may also be marked with the Standard Mark.

6.2.1 The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

7 PACKING

Unless otherwise agreed upon by the buyer and the seller, the *KAMBLIES* shall preferably be packed in bales or cases in conformity with the procedure laid down in IS 32 : 1971 or IS 741 : 1971.

8 SAMPLING

8.1 Lot

The number of *KAMBLIES* delivered to one buyer against one despatch note shall constitute a lot.

8.2 The conformity of the lot to the various requirements specified in the standard shall be determined on the basis of tests carried out on the samples selected from the lot.

8.3 Unless otherwise agreed, the number of pieces selected at random for inspection shall be in accordance with Table 2.

8.3.1 For selection of samples at random from the lot, procedure given in IS 4905 : 1968 may be followed.

Table 2 Sample Size

(Clause 8.3)

Lot Size (1)	Sample Size (2)	Sub-sample Size (3)
Up to 25	3	2
26 to 50	5	2
51 and above	8	3

8.4 Number of Samples and Criteria for Conformity

It shall be as follows:

Characteristics	Number of Samples	Criteria for Conformity
Ends, picks, mass, length, width and freedom from defects	According to col 2 of Table 2	All the test pieces shall meet the specified requirements
Scouring loss and breaking load	According to col 3 of Table 2	All the test pieces shall meet the specified requirements

ANNEX A (Clause 2)

LIST OF REFERRED INDIAN STANDARDS

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
32 : 1971	Code for seaworthy packaging of woollen, and worsted yarn and cloth (<i>second revision</i>)	1964 : 1970	Methods for determination of weight per square metre and weight per linear metre of fabrics (<i>first revision</i>)
741 : 1971	Code for inland packaging of woollen and worsted yarn and cloth (<i>first revision</i>)	1969 : 1985	Methods for determination of breaking load and elongation of woven textile fabrics (<i>second revision</i>)
1954 : 1990	Determination of length and width of woven fabrics — Methods (<i>second revision</i>)	4125 : 1987	Glossary of terms pertaining to defects in fabrics
1963 : 1981	Methods for determination of threads per unit length in woven fabrics (<i>second revision</i>)	4905 : 1968	Method for random sampling

ANNEX B (Clause 5.2)

EXTRACTS FROM THE GOVERNMENT OF INDIA, MINISTRY OF COMMERCE AND INDUSTRY (TRADE AND MERCHANDISE MARKS) NOTIFICATION NO. S.O. 2937, DATED 20 SEPTEMBER 1962

B-1 A trade description of length and width on woollen (including shoddy) and worsted fabricated items like blankets, shawls, scarves or other articles of a similar kind:

- i) the actual length of the piece shall not be less than stamped length by more than 1 percent.
- ii) the permissible limit of variation in respect of trade description of width shall be as those prescribed for width of woollen and worsted price goods (*see B-2*).

B-2 A trade description of width stamped on worsted, woollen and shoddy piece goods:

- i) in pieces of worsted fabric the stamped width shall not be greater or less than the actual width provided that the variation in width at any point is not more than 2 percent and on average not more than 1.5 percent.
- ii) in pieces of woollen and shoddy piece goods, the stamped width shall not be greater or less than the actual width, provided that the variation in width at any point is not more than 3 percent and on average not more than 2 percent.

ANNEX C (Table 1)

METHOD FOR DETERMINATION OF MASS OF KAMBLIES

C-1 Cut four specimens of 100 mm × 100 mm from a sample. Condition all the specimens in the desiccator charged with saturated solution of sodium nitrate at $27 \pm 2^\circ\text{C}$ for a period of 24 hours. Remove all the

specimens from the desiccator and immediately determine their collective mass in weighing balance to the nearest milligram.

C-2 Calculate mass of *KAMBLIES* in g/m².

ANNEX D

(Clause 5.3.1)

METHOD FOR DETERMINING SCOURING LOSS

D-1 TEST SPECIMEN

Take about 10 g of yarn from each sample. This shall constitute a test specimen.

D-2 PROCEDURE

Dry the test specimen to constant mass in the drying oven at $105 \pm 3^{\circ}\text{C}$ temperature and determine its mass accurately.

NOTE — Constant mass shall be deemed to have been reached if the difference between the two successive weighings at an interval of 20 minutes is less than 0.05 percent.

D-3 Extract the specimen with a mixture of benzene and methyl alcohol in the proportion of 3 : 2 in a Soxhlet apparatus for 4 hours at the rate of 5 extractions per hour, taking care to place the specimen in a

thimble and covering it with cotton wool previously extracted with petroleum hydrocarbon solvent (petroleum ether). Remove the specimen from the extract. Dry the residue to a constant mass (*see Note under D-2*) at $105 \pm 3^{\circ}\text{C}$ and determine the mass accurately.

D-4 CALCULATION

Calculate the scouring loss by the following formula:

$$\text{Scouring loss, percent} = \frac{a}{b} \times 100$$

where

a = mass of the dry residue (*see D-3*), and

b = mass of the test specimen (*see D-2*).

ANNEX E

(Clause 5.4.1)

LIST OF MAJOR FLAWS

- 1) More than one adjacent end missing in the body of the material running throughout the piece or more than three ends missing at a place and running over 25 cm or prominently noticeable double and running throughout the piece.
- 2) Undressed snarls noticeable over a length exceeding 5 percent of the length of the piece.
- 3) Smash definitely rupturing the texture of the fabric.
- 4) Hole, cut or tear other than pin holes.
- 5) Cockled finish causing defective appearance in texture of fabric.
- 6) Prominent mill rigs such as felted folds and crease produced during milling.
- 7) Prominent water marks all over the cloth.
- 8) Weft crack of two or more missing picks across the width of the fabric.
- 9) Weft bar due to the difference in raw material, count, twist, luster, colour, shade or pick spacing of adjacent groups of weft yarns (starting mark).
- 10) More than two adjacent ends running parallel, broken or missing and extending beyond 10 cm.
- 11) Noticeable warp or weft float in the body of the fabric.
- 12) Noticeable oil or other stain in the fabric.
- 13) Oily weft in the fabric.
- 14) Prominently noticeable slub or slubby weft or foreign matter such as blur, twigs, leaves, straw, etc.
- 15) Conspicuous broken pattern.
- 16) Prominently visible knot of warp or weft yarn tied into having hard projection.
- 17) Prominent selvedge defect.
- 18) Significant shading or listing in fabrics having a gradual change in tone or depth of shade of fabric (excluding selvedge or border running parallel to the selvedge).
- 19) Prominently noticeable dyeing defects such as patchy, streaky or uneven dyeing.
- 20) Milling and scouring defects such as excess or deficiency of cover due to difference in milling, scouring or raising.
- 21) Pilling or defective raising.

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